

COPY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Jeff G. Hall et al.

Serial No.:

09/982,667

Group No.:

1637

Filed:

10/18/01

Examiner:

Siew, J.

Entitled:

Detection Of Nucleic Acids By Multiple Sequential

Invasive Cleavages

TRANSMITTAL TO PTO FORM-1449

Assistant Commissioner for Patents Washington, D.C. 20231

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)(1)(i)(A)

I hereby certify that this correspondence (along with any referred to as being attached or enclosed) is, on the date shown below, being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231

Dated: January 17, 2003

Sir or Madam:

Enclosed please find Form PTO-1449 for filing in the U.S. Patent and Trademark Office.

A check for \$180.00 is also enclosed pursuant to 37 C.F.R. § 1.17(p) for filing this Information Disclosure Statement after three months as set forth in 37 C.F.R. § 1.97(c).

The Commissioner is hereby authorized to charge any additional fee or credit overpayment to our Deposit Account No. 08-1290. An originally executed duplicate of this transmittal is enclosed for this purpose.

Dated: January 17, 2003

Mary Ann Brow

Registration No. 42,363

MEDLEN & CARROLL, LLP 220 Montgomery Street, Suite 2200 San Francisco, California 94104

415/705-8410

Attorney Docket No.: FORS-06638

Serial No.: 09/982,667

oct 0 7 2004 U.S. Department of Commerce Pagent and Trademark Office

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Use Several Sheets If Newspary)

§ 1.98(b))

Applicant: James R. PRUDENT et al.

(37 CFR § 1.98(b))

Filing Date: 10/18/01

Group Art Unit:

115	PATENIT	DOCUMENTS
U		17070,011911.1111.0

Examiner Initials	Cite No.	Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Dat
	l	6,001,567	12/14/99	Brow et al.	435	6	07/12/96
	2	5,994,069	11/30/99	Hall et al.	435	6	03/24/97
	3	5,985,557	11/16/99	Prudent et al.	435	6	11/26/96
	4	5,888,780	03/30/99	Dahlberg et al.	435	91.53	02/19/97
	5	5,882,867	03/16/99	Ullman et al.	435	6	07/07/95
	6	5,874,283	02/23/99	Harrington et al.	435	252	05/30/95
	7	5,846,717	12/08/98	Brow et al.	435	6	01/24/97
	8	5,843,669	12/01/98	Kaiser et al.	435	6	11/29/96
	9	5,843,654	12/01/98	Heisler et al.	435	6	07/07/95
	10	5,837,450	11/17/98	Dahlberg et al.	435	6	06/06/95
	11	5,830,664	11/03/98	Rosemeyer et al.	435	6	07/11/95
	12	5,795,763	08/18/98	Dahlberg et al.	435	194	06/06/95
	13	5,792,614	08/11/98	Western et al.	435	6	08/02/96
	14	5,783,392	07/21/98	Seibl et al.	435	6	11/22/95
	15	5,719,028	02/17/98	Dahlberg et al.	435	6	02/06/97
	16	5,698,400	12/16/97	Cotton et al.	435	6	09/16/96
	17	5,691,142	11/25/97	Dahlberg et al.	435	6	06/06/96
	18	5,614,402	03/25/97	Dahlberg et al.	435	199	06/06/94
	19	5,601,976	02/11/97	Yamane et al.	435	6	09/16/92
	20	5, 545,729	08/13/96	Goodchild et al.	536	24.5	12/22/94
	21	5,541,311	07/30/96	Dahlberg et al.	536	23.7	06/04/93
	22	5,494,810	02/27/96	Barany et al.	435	91.52	11/22/94
	23	5,487,972	01/30/96	Geland et al.	435/6	435/91.2	01/05/93
	24	5,427,930	06/27/95	Birkenmeyer et al.	435	91/52	06/28/91
	25	5,422,253	06/06/95	Dahlberg et al.	435	91.53	12/07/92
	26	5,407,795	04/18/95	Kolberg et al.	435	5	10/15/93
	27	5,403,711	04/04/95	Walder et al	435	6	07/06/93
	28	5,660,988	08/26/97	Duck et al.	435/6	536/24.3	6/7/95
	29	5,380,833	06/10/95	Urdea	536	22.1	12/13/91
	30	5,210,015	05/11/93	Gelfand et al.	435	6	05/11/93
					1	l	

Examiner:

Date Considered:

EXAMINER:

Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(37 CFR § 1.98(b))

50

51

52

53

54

55

56

57

96/40999

94/29482

95/14106

92/02638

89/09284

96/20287

0 411 186 A1

0 482 714 A1

12/19/96

12/22/94

05/26/95

02/20/92

10/05/89

07/04/96

02/06/91

10/22/91

U.S. Department of Commerce Patent and Trademark Office

Attorney Docket No.: FORS-06638

Serial No.: 09/982,667

C10P 19/34

C12P 19/34

1/68

1/70

1/68

1/44

1/68

1/68

C12Q

C12Q 1/68

C12Q

C12Q 1/68

C12Q

C12Q 1/68

C12Q

C12Q

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use Several Sheets is repssar)

Applicant: James R. PRUDENT et al.

Filing Date: 10/18/01 Group Art Unit:

J.S. PATENT DOCUMENTS Cite Serial / Patent Examiner Filing Date Applicant / Patentee Class Subclass Initials No. Number 06/21/89 27 31 5,144,019 09/01/92 Rossi 536 09/29/88 32 435 6 5,118,605 06/02/92 Urdea 04/28/92 6 08/03/89 33 5,108,892 Burke et al. 435 11/24/87 07/09/91 435 6 34 5,030,557 Hogan et al. 35 5,011,769 04/30/91 Duck et al. 435 6 04/29/88 12/05/85 36 10/24/89 Duck et al. 435 6 4,876,187 4,818,680 04/04/89 435 6 12/18/85 37 Collins et al. 10/04/88 435 10/16/84 38 4,775,619 Urdea 6 39 435 91 10/25/85 4,683,202 07/28/87 Mullis 40 4,683,195 07/28/87 Mullis et al. 435 6 02/07/86 03/28/85 41 4,683,194 07/28/87 Saiki et al. 435/6 935/78 06/01/84 42 Olson 260 4,518,526 05/21/85 112 06/01/84 43 4,512,922 04/23/85 Jones et al. 260 112 04/16/85 06/01/84 44 4,511,503 Olson et al. 260 112 260 45 4,511,502 112 06/01/84 04/16/85 Builder et al. FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS Translation Document **Publication Date** Country / Patent Office Class Subclass Number Yes No 46 90/01069 02/08/90 **PCT** C12Q 1/68 47 92/06200 04/16/92 C12N 15/54 PCT 48 91/09950 07/11/91 **PCT** C12N 15/54 49 90/15157 1/68 12/13/90 **PCT** C12Q

PCT

PCT

PCT

PCT

PCT

PCT

European Patent Application

European Patent Application

U.S. Department of Commerce Patern and Trademark Office

Attorney Docket No.: FORS-06638

Applicant: James R. PRUDENT et al.

Serial No.: 09/982,667

INFORMATION DISCLOSURE STATEMENT BY APPLICAN
(Use Several Sheets If Necessary)

with next communication to applicant.

(37 CFR § 1.98(b))	Filing Date: 10/18/01 Group Art Unit:		
		OTHER DOCUMENTS (occluding Author, Title, Date, Relevant Pages, Place of Publication)		
	58	Abrams et al., "Comprehensive Detection of Single Base Changes in Human Genomic DNA Using Denaturing Gradient Gel Electro and a GC Clamp," Genomics 7:463-475 (1990)	ophores	
	59	Akhmetzjanov and Vakhitov, "Molecular cloning and nucleotide sequence of the DNA polymerase gene from <i>Thermus flavus</i> ," Nucl. Acid Res. 20:5839 (1992)		
	60	Altamirano et al., "Identification of Hepatitis C Virus Genotypes among Hospitalized Patients in British Columbia, Canada," J. Infect. Dis. 171:1034-1038 (1995).		
	61	Anderson and Young, "Quantitative Filter Hybridization", in Nucleic Acid Hybridization, Eds Hames & Higgins, IRL Press, Washington, DC, pp. 73-111 (1985)		
	62	Electrophoresis, 2nd Edition, ed. Anthony T. Andrews, Clarendon Press, New York, New York (1986), pp. 153-154		
	63	Antao et al. "A thermodynamic study of unusually stable RNA and DNA hairpins," Nucl. Acids Res. 19:5901-5905 (1991)		
	64	Bambara et al., "Enzymes and Reactions at the Eukaryotic DNA Replication Fork," J. Biol. Chem. 272:4647-4650 (1997)		
	65	Barany, "Genetic disease detection and DNA amplification using cloned thermostable ligase," Proc. Natl. Acad. Sci., 88:189-193 (1	1991)	
	66	Barany, "The Ligase Chain Reaction in a PCR World," PCR Methods and Applic., 1:5-16 (1991)		
	67	Bardwell et al., "Specific Cleavage of Model Recombination and Repair Intermediates by the Yeast Rad1-Rad10 DNA Endonuclea Science 265:2082-2085 (1994)	ase,"	
	68	Barnes et al., "Mechanism of Tracking and Cleavage of Adduct-damaged DNA Substrates by the Mammalian 5'- to 3'Exonuclease/Endonuclease RAD2 Homologue 1 or Flap Endonuclease 1", J. Biol. Chem. 271:29624-29632 (1996)		
	69	Bergseid et al., "A High Fidelity Thermostable DNA Polymerase Isolated from Pyrococcus Furiosus," Strategies 4:34-35 (1991)		
	70	Bhagwat et al., "The 5'-Exonuclease Activity of Bacteriophage T4 RNase H is Stimulated by the T4 Gene 32 Single-stranded DNA Protein, but Its Flap Endonuclease Is Inhibited," J. Biol. Chem. 272:28523-28530 (1997);	A-bind	
	71	Bonch-Osmolovskaya, et al., Microbiology (Engl. Transl. of Mikrobiologiya) 57:78-85 (1988)		
	72	Brutlag et al., "An Active Fragment of DNA Polymerase Produced By Proteolytic Cleavage," Biochem. Biophys. Res. Commun. 37 (1969)	1:982-9	
	73	Brow et al., "Differentiation of Bacterial 16S rRNA Genes and Intergenic Regions and Mycobacterium tuberculosis katG Genes by Structure-Specific Endonuclease Cleavage," J. of Clin. Micro. 34:3129-3137 (1996)):	
	Carballeira et al., "Purification of a Thermostable DNA Polymerase from Thermus thermophilus HB8, Useful in the Polymer Reaction," Biotechniques 9:276-281 (1990)			
	75	Ceska et al., "A helical arch allowing single-stranded DNA to thread through T5 5'-exonuclease," Nature 382:90-93 (1996)		
	76	Ceska et al., "Structure-specific DNA cleavage by 5' nucleases," TIPS 23 (1998)		
	77	Copley and Boot, "Exonuclease Cycling Assay: An Amplified Assay for the Detection of Specific DNA Sequences," BioTechniq 891 (1992)		
	78	Cuthbert, "Hepatitis C:Progress and Problems," Clin. Microbiol. Rev. 7:505-532 (1994)		
	79	DeMott et al., "Human RAD2 Homolog 1 5'-3'-Exo/Endonuclease Can Efficiently Excise a Displaced DNA Fragment Containing a 5'- Terminal Abasic Lesion by Endonuclease Activity," J. Biol. Chem. 271:30068-30076 (1996) Doty et al., "Strand Separation and Specific Recombination in Deoxyribonucleic Acids: Physical Chemical Studies," Proc. Natl. Acad. S USA 46:461-476 (1960) Duck et al., "Probe Amplifier System Based on Chimeric Cycling Oligonucleotides," BioTech., 9:142-147 (1990)		
	80			
	81			
	82	Dunn et al., "Complete Nucleotide Sequence of Bacteriophage T7 DNA and the Locations of T7 Genetic Elements," J. Mol. Biol. 166:47 535 (1983)		
xaminer:		Date Considered:		

PTO-1449
ed)

Patent and Trademark Office

INFORMATION DISCLOSURE STATEMENT SYNAMICANT

(Use Saveral Sheets of Management)

Attorney Docket No.: FORS-06638

Serial No.: 09/982,667

INFORMATION DISCLOSURE STATEMENT BYRYPE CANT (Use Several Sheets If Necessary)	Applicant: James R. PRUDENT et al.			
(37 CFR § 1.98(b))	Filing Date: 10/18/01 Group Art Unit:			
OTHER DOCUMENTS (Including Author, Title	e, Date, Relevant Pages, Place of Publication)			
83 Engelke, "Purification of Thermus Aquaticus DNA Polym	erase Expressed in Escherichia coli," Anal. Biochem 191:396-400 (1990)			
84 Eom et al., "Structure of Taq polymerase with DNA at the	Eom et al., "Structure of Taq polymerase with DNA at the polymerase active site," Nature 382:278-282 (1996)			
85 Erlich et al., "Recent Advances in the Polymerase Chain	Erlich et al., "Recent Advances in the Polymerase Chain Reaction," Science 252:1643-1651 (1991)			
Fahy et al., "Self-sustained Sequence Replication (3SR): PCR Meth. Appl., 1:25-33 (1991)	An Isothermal Transcription-based Amplification System Alternative to PCR,"			
87 Garforth et al., "Structure-specific DNA binding by bacter	riophage T5 5'→3' exonuclease," Nucleic Acids Res. 25:3801-3807 (1997)			
88 Gelfand, PCR Technology - Principles and Applications for	or DNA Amplification (H.A. Erlich, Ed.), Stockton Press, New York, p. 19 (1989)			
Guatelli et al., "Isothermal, in vitro amplification of nucle Natl. Acad. Sci., 87:1874-1878 (1990) with an erratum at	ic acids by a multienzyme reaction modeled after retroviral replication," Proc. Proc. Natl. Acad. Sci., 87:7797 (1990)			
90 Harrington et al., "DNA Structural Elements Required for	Harrington et al., "DNA Structural Elements Required for FEN-1 Binding," J. Biol. Chem. 270:4503-4508 (1995)			
91 Harrington et al., "The characterization of a mammalian I	DNA sturcture-specific endonuclease," EMBO Journ. 13:1235-1246 (1994)			
Harrington and Lieber, "Functional domains within FEN-I nucleotide excision repair," Genes and Develop. 8:1344-1	and RAD2 define a family of structure-specific endonucleases: implications for 1355 (1994)			
93 Hayashi, "PCR-SSCP: A Simple and Sensitive Method for	r Detection of Mutations in the Genomic DNA," PCR Meth. Appl., 1:34-38, (1991)			
94 Higuchi, R., (Ehrlich, H.A. (Ed.)), PCR Technology: Prince	ciples and Applications for DNA Amplification, Stockton Press, pp. 61-70 (1991)			
	Hiraro et al. "Most compact hairpin-turn structure exerted by a short DNA fragment, d(GCGAAGC) in solution: an extraordinarily stable structure resistant to nucleases and heat," Nuc. Acids Res. 22:576-582 (1994)			
	Holland et al., "Detection of specific polymerase chain reaction product by utilizing the 5'-3' exonuclease activity of Thermus aquaticus DNA polymerase," Proc. Natl. Acad. Sci. USA 88:7276-7280 (1991)			
Hosfield et al., "Structure of the DNA Repair and Replica FEN-1 Activity," Cell 95:135-146 (1996)	Hosfield et al., "Structure of the DNA Repair and Replication Endonuclease and Exonuclease FEN-1: Coupling DNA and PCNA Binding to FEN-1 Activity," Cell 95:135-146 (1996)			
Hosfield et al., "Newly Discovered Archaebacterial Flap E and Catalysis Resembling Human Flap Endonuclease-1,".	Endonucleases Show a Structure-Specific Mechanism for DNA Substrate Binding J. Biol. Chem. 273:27154-17161			
Huang et al., "Role of Calf RTH-1 Nuclease in Removal of 9277 (1996)	of 5'-Ribonucleotides during Okazaki Frament Processing," Biochemistry 35:9266-			
Hwang et al., "The crystal structure of flap endonuclease-	Hwang et al., "The crystal structure of flap endonuclease-1 from Methanococcus jannaschii," Nature Structural Biology 5:707-713 (1998);			
Inchauspe et al., "Use of Conserved Sequences from Hepa Reaction," Hepatology 14:595-600 (1991)	Inchauspe et al., "Use of Conserved Sequences from Hepatitis C Virus for the Detection of Viral RNA in Infected Sera by Polymerase Chai Reaction," Hepatology 14:595-600 (1991)			
102 Ito et al., "Compilation and alignment of DNA polymeras	Ito et al., "Compilation and alignment of DNA polymerase sequences," Nucl. Acids Res. 19:4045-4057 (1991)			
Jacob and Monod, "On the Regulation of Gene Activity,"	Jacob and Monod, "On the Regulation of Gene Activity," Cold Springs Harbor Symposium on Quantitative Biol. XXVI:193-211 (1961)			
Johnson et al., "Requirement of the Yeast RTH1 5' to 3' 1 (1995)	Johnson et al., "Requirement of the Yeast RTH1 5' to 3' Exonuclease for the Stability of Simple Repetitive DNA," Science 269:238-240 (1995)			
	ase From the Extremely Thermophilic Bacterium Thermus flavus," Biokhimiya			
	Kim et al., "Crystal structure of Thermus aquaticus DNA polymerase," Nature 376:612-616 (1995)			
	Kornberg, DNA Replication, W.H. Freeman and Co., San Francisco, pp. 127-139 (1980)			
	oled from a library of hexamers or pentamers," Proc. Natl. Acad. Sci. USA			
Kwoh et al., "Transcription-based amplification system an sandwich hybridization format," Proc. Natl. Acad. Sci., 86	d detection of amplified human immunodeficiency virus type 1 with a bead-based 5:1173-1177 (1989)			
	ne polymerase chain reaction: Human immunodeficiency virus type 1 model			
Examiner:	Date Considered:			
EXAMINER: Initial citation considered. Draw line through citation if not in				
with next communication to applicant.				

Attorney Docket No.: FORS-06638

Applicant: James R. PRUDENT et al.

Serial No.: 09/982,667

with next communication to applicant.

Filing Date: 10/18/01

Group Art Unit:

U.S. Department of Commerce Patout and Wrademark Office

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use Several Sheets If Newspary)

R § 1.98(b)) (37 CFR § 1.98(b))

(37 CFR 9 1.9	0(0))	
		OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)
	111	Landegren, "Molecular mechanics of nucleic acid sequence amplification," Trends in Genetics 9:199-204 (1993)
	112	Lawyer et al., "Isolation, Characterization, and Expression in Escherichia coli of the DNA Polymerase Gene from Thermus aquaticus," J. Biol. Chem. 264:6427-6437 (1989)
	113	Leirmo et al., "Replacement of Potassium Chloride by Potassium Glutamate Dramatically Enhances Protein-DNA Interactions in Vitro," Biochem. 26:2095-2101 (1987)
	114	Levine, "The Tumor Suppressor Genes," Annu. Rev. Biochem. 62:623 (1993)
	115	Li et al., "Lagging Strand DNA Synthesis at the Eukaryotic Replication Fork Involves Binding and Stimulation of FEN-1 by Proliferating Cell Nuclear Antigen," J. Biol. Chem. 270:22109-22112 (1995)
	116	Lieber, "The FEN-1 family of structure-specific nucleases in eukaryotic DNA replication, recombination and repair," <i>BioEssays</i> 19:233-240 (1997)
	117	Lindahl, et al., "Deoxyribonuclease IV: A New Exonuclease From Mammalian Tissues," Proc. N.A.S. 62:597-603 (1968)
	118	Lindahl and Karlström, "Heat-Induced Depyrimidination of Deoxyribonucleic Acid in Neutral Solution," Biochem. 12:5151-5154 (1973)
	119	Longley et al. "Characterization of the 5' to 3' exonuclease associated with Thermus aquaticus DNA polymerase," Nucl. Acids Res. 18:7317-7322 (1990)
	120	Lundquist, et al., "Transient Generation of Displaced Single-Stranded DNA during Nick Translation," Cell 31:53-60 (1982)
	121	Lyamichev et al."Structure-Specific Endonucleolytic Cleavage of Nucleic Acids by Eubacterial DNA Polymerases," Science 260:778-783 (1993)
	122	Marmur and Lane, "Strand Separation and Specific Recombination in Deoxyribonucleic acids: Biological Studies," Proc. Natl. Acad. Sci. USA 46:453-461 (1960)
	123	Mathur et al., "The DNA polymerase gene from the hyperthermophilic marine archaebacterium Pyrococcus furiosus, shows sequence homology with α-like DNA polymerases," Nucl. Acids Res. 19:6952 (1991)
	124	Milligan and Ublenbeck, "Synthesis of Small RNAs Using T7 RNA Polymerase," Methods Enzymol. 180:51 (1989)
	125	Milligan et al., "Oligoribonucleotide synthesis using T7 RNA polymerase and synthetic DNA templates," Nucl. Acids. Res. 15(21): 8783-8789 (1987)
	126	Mullis, "The Polymerase Chain Reaction in an Anemic Mode: How to Avoid Cold Oligodeoxyribonuclear Fusion," PCR Methods Applic., 1:1-4 (1991)
	127	Mullis and Faloona, "Specific Synthesis of DNA in Vitro via a Polymerase-Catalyzed Chain Reaction," Methods in Enzymology 155:335-350 (1987)
	128	Murante et al., "Calf 5' to 3' Exo/Endonuclease Must Slide from a 5' End of the Substrate to Perform Structure-specific Cleavage," J. Biol. Chem. 270:30377-30383 (1995)
	129	Murante et al., "The Calf 5'- to 3'-Exonuclease Is Also an Endonuclease with Both Activities Dependent on Primers Annealed Upstream of the Point of Cleavage," J. Biol. Chem. 269:1191-1196 (1994)
	130	Murray et al., "Structural and Functional Conversation of the Human Homolog of the Schizosaccharomyces pombe rad2 gene, Which is Required for Chromosome Segregation and Recovery from DNA Damage," Molecular and Cellular Biology 14:4878-4888 (1994)
	131	Myers et al., "Reverse Transcription and DNA amplification by a Thermus thermophilus DNA Polymerase," Biochem. 30:7661-7666 (1991)
	132	Nielsen PE et al., "Peptide nucleic acids (PNAs): Potential anti-sense and anti-gene agents," Anticancer Drug Des. 8:53-63 (1993)
	133	Nolan et al., "Kinetic Analysis of Human Flap Endonuclease-1 by Flow Cytometry," Biochemistry 35:11668-11677 (1996)
	134	Nugent et al., "Characterization of the Apurinic Endonuclease Activity of Drosophila Rrpl," Biochemistry 32:11445-11452 (1993)
	135	Perler et al., "Intervening sequences in an Archaea DNA polymerase gene," Proc. Natl. Acad. Sci. USA 89:5577-5581 (1992)
	136	Pontius and Berg, "Rapid renaturation of complementary DNA strands mediated by cationic detergents: A role for high-probability binding domains in enhancing the kinetics of molecular assembly processes," <i>Proc. Natl. Acad. Sci. USA</i> 88:8237-8241 (1991)
Examiner:		Date Considered:
EXAMINER:		tial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form the next communication to applicant.

U.S. Department of Commerce Para action ademark Office

Attorney Docket No.: FORS-06638

Serial No.: 09/982,667

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)

Applicant: James R. PRUDENT et al.

(37 CFR § 1.98(b)))		Filing Date: 10/18/01	Group Art Unit:	
		OTHER DOCUMENTS (Including Author, Title, Da	ate, Relevant Pages, Place of Publication)		
1	37	Rao et al., "Methanococcus jannaschii Flap Endonuclease: Ex 180:5406-5412 (1998);	xpression, Purification, and Substrate Requ	irements," J. of Bacteriology	
1	38	Reagan et al., "Characterization of a Mutant Strain of Saccharomyces cerevisiae with a Deletion of the RAD27 Gene, a Structural Homolog of the RAD2 Nucleotide Excision Repair Gene," J. of Bacteriology 177:364-371 (1995);			
1	39	Saiki et al., "Primer-Directed Enzymatic Amplification of DNA with a Thermostable DNA Polymerase," Science 239:487-491 (1988);			
1	40	Sambrook et al., Molecular Cloning. A Laboratory Manual, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, pp. 1.63-1.69 (1989);			
1	41	Setlow and Komberg, "Deoxyribonucleic Acid Polymerase: Tv	wo Distinct Enzymes in One Polypeptide,"	J. Biol. Chem. 247:232-240 (1972)	
1	42	Siegal et al., "A 5' to 3' exonuclease functionally interacts with	th calf DNA polymerase e," Proc. Natl. Ac	ad. Sci. USA 89:9377-9381 (1992);	
1	43	Shen et al., "Flap endonuclease homologs in archaebacteria ex	xist as independent proteins," TIBS 23 (199	8);	
1	44	Shen et al., "Essential Amino Acids for Substrate Binding and (1996)	Catalysis of Human Flap Endonuclease 1,	" J. of Biol. Chem. 271:9173-9176	
1.	45	Smith et al., "Novel Method of Detecting Single Base Substitu Genomics 3:217-223 (1988);	utions in RNA Molecules by Differential M	elting Behavior in Solution,"	
1	46	Sommers et al., "Conditional Lethality of Null Mutations in R Exonuclease Required for Lagging Strand DNA Synthesis in I	THI That Encodes the Yeast Counterpart of Reconstituted Systems," J. of Biol. Chem. 2	f a Mammalian 5'- to 3'- 70:4193-4196 (1995);	
1	47	Stark, "Multicopy expression vectors carrying the <i>lac</i> repressor 5:255-267 (1987);	r gene for regulated high-level expression (of genes in Escherichia coli," Gene	
1	48	Studier and Moffatt, "Use of Bacteriophage T7 RNA Polymera 189:113-130 (1986);	ase to Direct Selective High-level Expression	on of Cloned Genes," J. Mol. Biol.	
. 1	49	Tindall and Kunkel, "Fidelity of DNA by the Thermus aquation	cus DNA Polymerase," Biochem. 27:6008-6	5013 (1988);	
1	50	Turchi et al., "Enzymatic completion of mammalian lagging-st	trand DNa replication," Proc. Natl. Acad. S	Sci. USA 91:9803-9807 (1994);	
1	51	Uhlenbeck, "A small catalytic oligoribonucleotide," Nature 32	8:596-600 (1987);		
1	52	Urdea et al., "A novel method for the rapid detection of specific nucleotide sequences in crude biological samples without blotting or radioactivity; application to the analysis if hepatitis B virus in human serum," Gene 61:253-264 (1987); Wu and Wallace, "The Ligation Amplification Reaction (LAR) - Amplification of Specific DNA Sequences Using Sequential Rounds of Template-Dependent Ligation," Genomics 4:560-569 (1989);			
1	53				
1	54	Wu et al., "Processing of branched DNA intermediates by a co (1996);	omplex of human FEN-1 and PCNA," Nuc	leic Acids Research 24:2036-2043	
1	55	Xu et al., "Biochemical and Mutational Studies of the 5'-3' En 302 (1997);	xonuclease of DNA Polymerase 1 of Esche	richia coli," J. Mol. Biol. 268:284	
1	56	Zwickl et al., "Glyceraldehyde-3-Phosphate Dehydrogenase from the Hyperthermophilic Archaebacterium Pyrococcus woesei: Characterization of the Enzyme, Cloning and Sequencing of the Gene, and Expression in Escherichia coli," J. Bact. 172:4329-4338 (1			
1	57	Hiraoka et al., "Sequence of human FEN-1, a structure specifiand human," Genomics 25:220-225 (1995);	ic endonuclease, and chromosomal localiza	tion of the gene (FENI) in mouse	
1	58	Augustyns et al., "Hybridization specificity, enzymatic activity beta-D-erythro-hexopyranosyl nucleosides," Nucleic Acids Res		acleotides containing 2,4-dideoxy-	
1	59	Agrawal et al., "Modified oligonucleotides as therapeutic and	diagnostic agents," Current Opinion in Bio	technology, 6:12-19 (1995);	
1411	60	Corey, "4800-fold Acceleration of Hybridization of Chemically Modified Oligonucleotides," J. of the Amer. Chem. Soc. 117:9373-9374 (1995);			
1	61	Cotton, "Current methods of mutation detection," Mutation Research 285:125-144 (1993);			
1	62	Schmidt et al., "The use of oligonucleotide probes containing from Escherichia coli," Biochimica et Biophysica Acta. 1130:4	2'-deoxy-2'fluoronucleosides for regiospec 41-46 (1991);	ific cleavage of RNA by RNaseH	
			T		
Examiner:			Date Considered:		

0 7 2004

FORM PTO-1449 (Modified)

PTO-1449

ed)

U.S. Department of Commerce
Patent and Stratement Office
INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Use Several Sheets If Necessary)

Attorney Docket No.: FORS-06638

Applicant: James R. PRUDENT et al.

Serial No.: 09/982,667

37 CFR § 1.98(b))		Filing Date: 10/18/01	Group Art Unit:	
	OTHER DOCUMENTS (Including Author, Title, D	ate, Relevant Pages, Place of Publication)		
163	Lee et al., "Allelic discrimination by nick-translation PCR with	h fluorogenic probes," Nucleic Acids Res. 2	1(16):3761-3766 (1993)	
164	Livak et al., "Oligonucleotides With Fluorescent Dyes at Opposite Ends Provide a Quenched Probe System, Useful for Detecting PCR Product and Nucleic Acid Hybridization," PCR Methods and Appln. 4:357-362 (1995)			
165	Gamper et al., "Solution Hybridization of Crosslinkable DNA Oligonucleotides to Bacteriophage M13 DNA," J. Mol. Biol. 197:349-362 (1987)			
166	Lima et al., "Implication of RNA Structure on Antisense Oligonucleotide Hybridization Kinetics," Biochemistry 31:12055-12061 (1992)			
167	Sigman et al., "Chemical Nucleases," Chem. Rev. 93:2295 (19	93)		
168	Youil et al., "Screening for Mutations by Enzyme Mismatch (1995)	Cleavage with T4 Endonuclease VII," Proc.	Natl. Acad. Sci. USA 92:87-91	
169	Abramson et al., "Characterization of the 5'-3' Exonuclease Activity of Thermus Aquaticus DNA Polymerase," FASEB J. 5(4) 386 (1991)			
170	Roychoudhury and Wu, "Novel Properties of Escherichia coli	Exonuclease III," J. Biol. Chem. 252:4786	-4789 (1977)	
	·			
*				
	· ·			
kaminer:		Date Considered:		